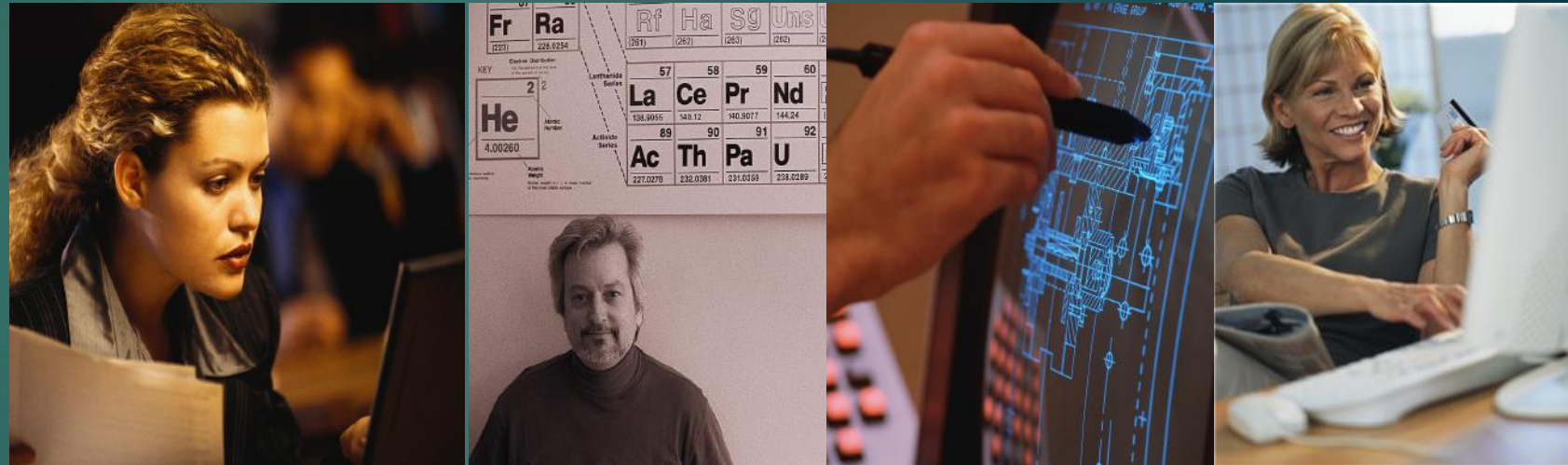


Delivering a Graduate Course in Universal Design for Learning: Reflecting on *Eighteen Years* of Experiences



FRANCES SMITH, ED.D

ADJUNCT PROFESSOR/ GW UNIVERSITY

EDUCATOR/UDL CONSULTANT/ RECOGNIZING DIFFERENCES, LLC

2011-12 UDL FELLOW | Member -CAST UDL NATIONAL FACULTY

Your Guide on the Side



Frances G. Smith, Ed.D

- Adjunct Professor – Graduate School of Education and Human Development, GW University, Washington, DC, USA
- *Educator/Consultant* - Recognizing Differences, LLC, Richmond, VA, USA
- Member- CAST UDL National Faculty
- *UDL Postdoctoral Fellow in Residence @ CAST/ Boston College Lynch School of Education (2011-12)*

Goals for this Session

- Identify strategies used in the development of this course on universal design for learning (UDL).
- Consider strategies, technologies, and techniques used in the delivery of this UDL course.
- Explore tools and approaches that have been applied in successful ways to improve this course and engage student learning.

Promoting UDL in Higher Education



CAST Professional
Learning

EDUCAUSE



VCU



An Educator's UDL Journey



POINTS TO PONDER

Evolving Trends in UDL Policy

U.S. Public Law -THE HIGHER EDUCATION OPPORTUNITY ACT OF 2008



Section 103(24) UNIVERSAL DESIGN FOR LEARNING.-- The term `universal design for learning' means a scientifically valid framework for guiding educational practice that—

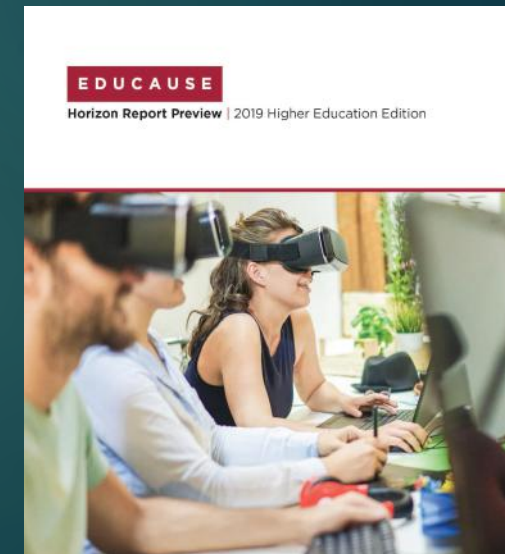
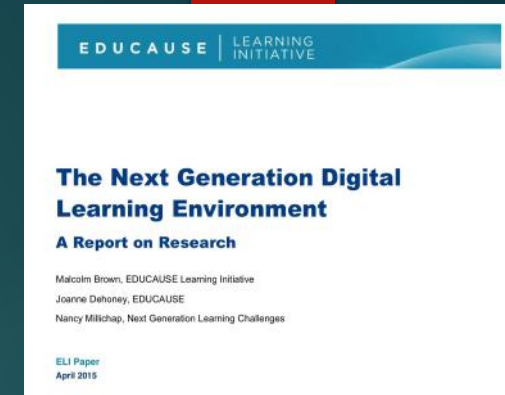
- `(A) provides flexibility in the ways information is presented, in the ways students respond or demonstrate knowledge and skills, and in the ways students are engaged; and
- `(B) reduces barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who are limited English proficient."

Higher Education Opportunity Act of 2008

Evolving Trends in Technology

Forecasts on changes to the LMS suggest that the LMS of the future, or next generation digital learning environment (NGDLE), will include a number of embedded features that personalize the experience and focus on learning....and include an array of applicationsthat include back-end user analytics, and embedded accessibility functionality.

Brown, M., Dehoney, J., Millichap, N. (2015). *The next generation digital learning environment: A report on research*. EDUCAUSE Library. Retrieved from <http://www.educause.edu/library/resources/next-generation-digital-learning-environment-report-research>



Evolving Trends in Technology

The Horizon Report 2021

- ▶ Widespread Adoption of Hybrid Learning Models
- ▶ Increased Use of Learning Technologies
 - ▶ ...videoconferencing, team-based platforms, virtual classrooms
- ▶ Online Faculty Development



<https://bit.ly/3Ejwmxg>



Adult Learning Principles

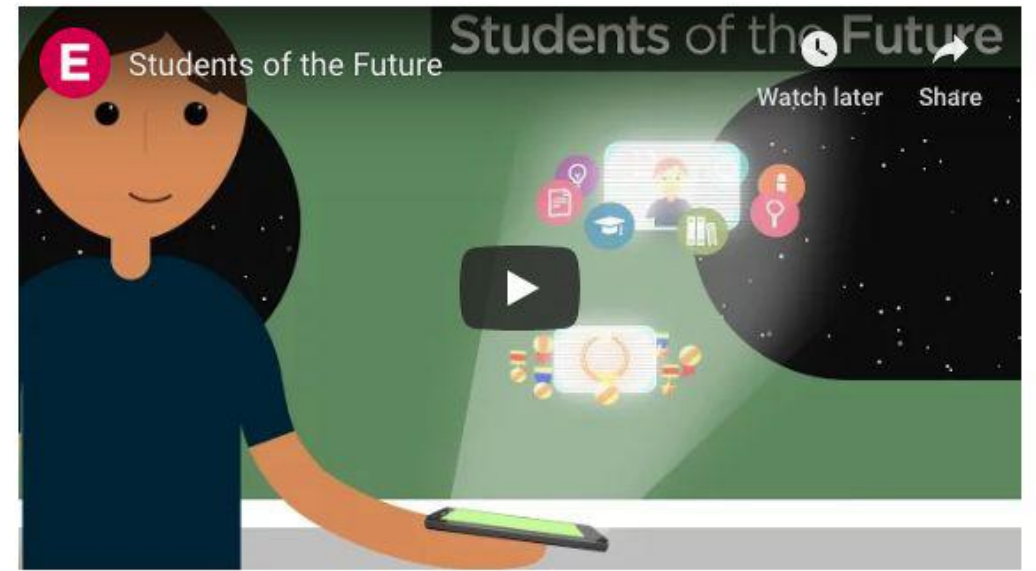
- ▶ Adults need to know **why** they are learning.
- ▶ Adults are motivated to learn by the **need to solve problems**.
- ▶ Adults' **previous experience** must be respected and built upon.
- ▶ Adults need learning approaches that match their **background and diversity**.
- ▶ Adults need to be **actively involved** in the learning process.

Bryan, R. L., Kreuter, M. W., & Brownson, R. C. (2009). Integrating Adult Learning Principles Into Training for Public Health Practice. *Health Promotion Practice*, 10(4), 557–563. <https://doi.org/10.1177/1524839907308117>

Students of the Future – The Opportunity for **UDL**

Video: Students of the Future

by **Gerry Bayne** and **Gregory Dobbin** ⌚ Monday, March 13, 2017



<https://bit.ly/3Go0SrP>

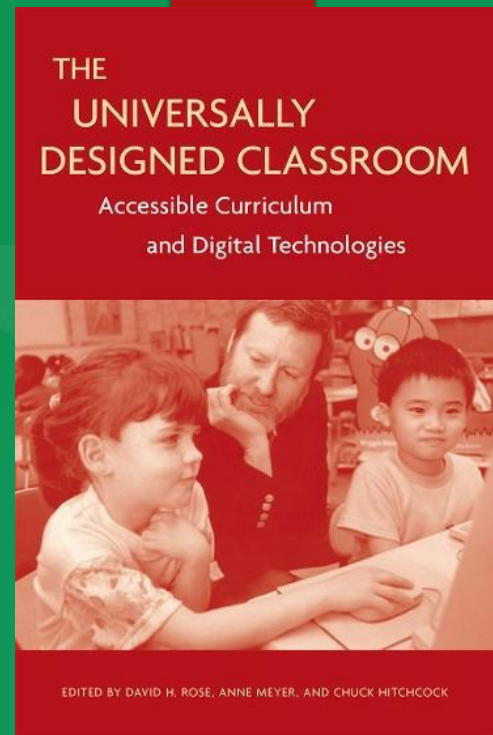


FIRST STEPS

“The ultimate educational goals will no longer be about the mastery of content (content will be available everywhere, anytime, electronically) but about the mastery of learning. At commencement, we will graduate students who are "expert learners."

“They will know their own strengths and weaknesses, know the kinds of media, adaptations, strategies, and external technologies they can use to overcome their weaknesses and extend their strengths, and the kinds of colleagues who are likely to complement their own patterns of learning and performance.”

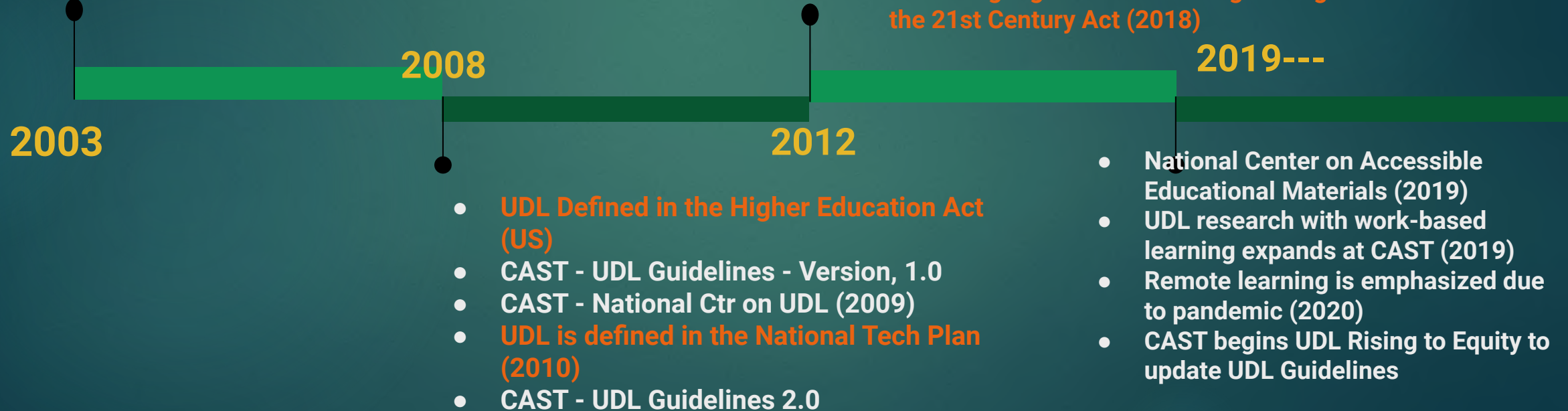
Meyer, A., & Rose, D. H. (2005). *The future is in the margins: The role of technology and disability in educational reform*. In D. H. Rose, A. Meyer & C. Hitchcock (Eds.), [*The universally designed classroom: Accessible curriculum and digital technologies*](#) (pp. 13-35). Cambridge, MA: Harvard Education Press CAST



A Timeline of Evolution

- CAST Summer Institute (2001)
- The Importance of Web Access grows
- *Teaching Every Student in the Digital Age- Universal Design for Learning* published (2002)
- **NIMAS Standards defined in Individuals with Disabilities Education Act of 2004 (US)**
- National UDL Task Force established 2006 (US)
- Dr. Susanne Croasdaile - joins as Co-Instructor (2006-2013)
- First UDL Summit (2007) in Washington, DC

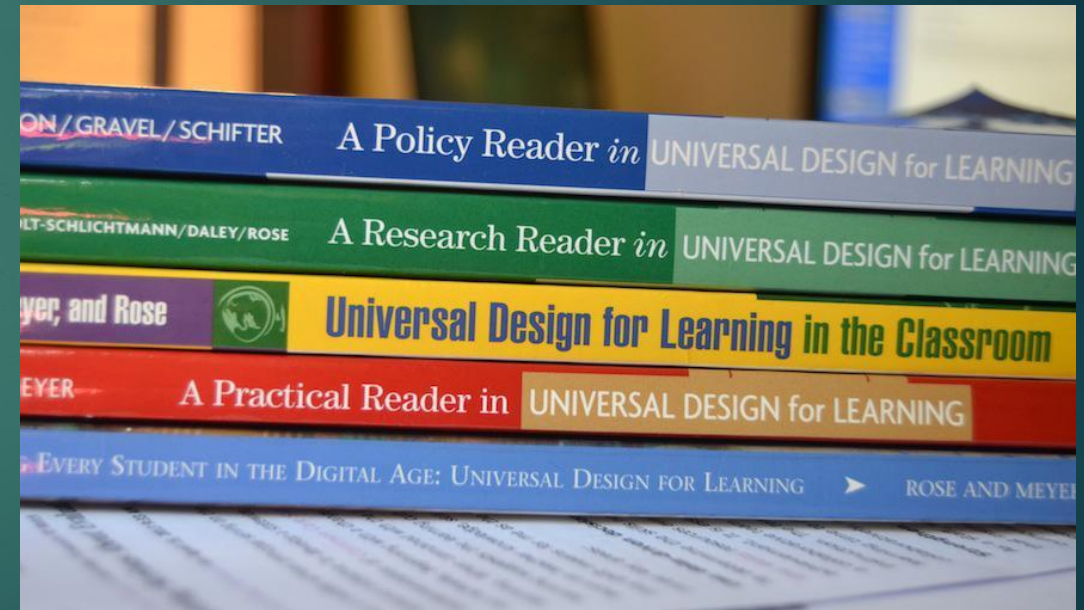
- UDL research and innovation products continue to grow!
- *UDL Theory & Practice* Published (2014)
- UDL Defined in Every Student Succeeds Act (2015)
- **UDL is defined in the National Tech Plan (2016)**
- CAST opens new UDL Guidelines website (2018)
- Learning Designed website launches (2018)
- **UDL is highlighted in the Strengthening CTE for the 21st Century Act (2018)**





A Beginning Experimental Summer Offering:

- Universal Design for Learning – Implications for Career Assessment & Transition
- SPED 6229/ TRED 6229: Universal Design for Learning (**Cross Listed Blended Offering 2003-13**)
- SPED 6210: Universal Design for Learning (**Online offering – 2013 – present**)





The Ohio State University

Partnership Grant

Improving the quality of higher education
for students with disabilities

Faculty and Administrator Competencies Survey

Attention Faculty, Administrators, and Disability Services Personnel: We need your help in identifying key training competencies for faculty and administrators on teaching students with disabilities.

[More Information and Go To the Survey.](#)

Fast Facts for Faculty

The Fast Facts for Faculty are information briefs designed to help college and university instructors improve the climate and quality of education for students with disabilities. [More Information about Fast Facts for Faculty.](#)

Training and Professional Development Opportunities

Personnel from select grant partners can be contacted to arrange training presentations on various topics. [More Information about Training and Professional Development.](#)

Faculty and Administrator Modules in Higher Education (FAME)

FAME - Improving the Quality of Education for Students with Disabilities: A Multi-State Collaborative Network of Colleges and Universities. [More Information about FAME.](#)

About Us

The OSU Partnership Grant creates and maintains active partnerships among OSU departments, two-year community colleges, and collaborators at national, regional, and local levels. The primary objective of these unique and dynamic partnerships is to enhance the postsecondary experience for students with



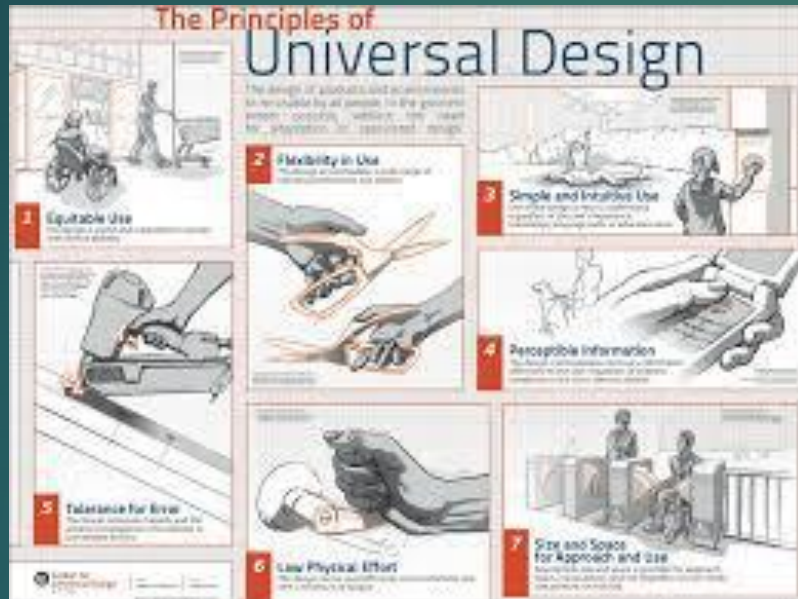
- Modeled after content from the 2001 CAST Summer Institute on Universal Design for Learning
 - Initial Grant Funding to support faculty teaching -
 - ▶ Dr. Robin Zeff, Professor of Writing
 - ▶ Dr. Cayo Gamber, Assistant Professor of Writing
 - ▶ Frances Smith, Adjunct Faculty - Special Education
- Foundational graduate course; 2003-present; blended and online offerings.
 - Required course in Master's programs for Collaborative Vocational Evaluation Training and Interdisciplinary Secondary Transition Services
 - Listed Elective for Doctorate in Special Education
- A continuing education opportunity for faculty and staff
- Infusion of UDL best practices through Partnerships with [Disability Support Services](https://www2.gwu.edu/~bygeorge/031505/universaldesign.html), Provost's [Online Learning Initiative - OLI](https://www2.gwu.edu/~bygeorge/031505/universaldesign.html), [Academic Technology](https://www2.gwu.edu/~bygeorge/031505/universaldesign.html)



<https://www2.gwu.edu/~bygeorge/031505/universaldesign.html>

Early Steps Forward.....

A Foundation in UD



http://www.ncsu.edu/ncsu/design/cud/about_ud/udprinciples.htm

3 Key Principles

I. Provide Multiple Means of Representation

II. Provide Multiple Means of Action and Expression

III. Provide Multiple Means of Engagement

<http://www.cast.org>

Techniques and Strategies




- UDL theory and principles
- Accessible web design that offers clear themes and navigation systems
- Multiple formats to complement varied learning approaches – text, html, video, PowerPoint, audio
 - Modeling of accessible content and design
- Exploration of tools across a UDL lens

The Course Content

- An orientation to UDL theory and practice.
- A comprehensive review of technology tools and strategies that complement a UD/UDL approach.
- A grounded orientation to the importance of developing clear goals.
- Application opportunities for teacher and practitioners to apply the UDL lens into curriculum, lesson development and practice.
- A final project focused on designing a UDL systems change plan.

THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON DC



A Graduate Course in Universal Design for Learning (UDL)

SPED 6210 GWU GRADUATE COURSE IN UDL (ONLINE) – 3 graduate credits
An online course on UDL theory, practice and application to designing curricula and learning environments that address learner variability. Applicable for a range of majors including general and special education, transition special education, career assessment, curriculum & instruction, rehabilitation and adult learning.

Fall 2014 – GW University, Washington, DC
Blended and online graduate coursework in UDL has been provided at GW University since 2003. This online course is taught using GW's Blackboard learning management system (LMS) and a host of social media tools to explore theory and content while enriching learner engagement. Guest expert presentations through synchronous and asynchronous connections include national speakers and organizations from CAST, The IDEA Partnership, The National UDL Taskforce, The Department of Education leadership, UDL state leaders, college faculty, professional organization leaders, and practitioners.

FACULTY: Dr. Fran Smith, CVE and invited UDL experts.

GW Contact: Joan Kester, Ed.D., CRC
The George Washington University
Graduate School of Education & Human Development
P: 202-994-1524 | E: jkester@gwu.edu

Registration Information/ Fees:
<http://www.gwu.edu/take-class>
3 graduate credits.

Location Information:
<http://blackboard.gwu.edu>

KEY CONTENT AREAS

- Principles of universal design and universal design for learning
- Learner variability and UDL
- The history and theoretical framework of UDL
- Policy addressing UDL and next steps
- Accessible instructional materials and UDL
- Inclusive instructional materials
- The brain and learning
- Planning for UDL systems change and implantation
- Assistive and instructional technologies that support UDL
- Targeted instructional strategies and approaches
- UDL and the Curriculum: Mindful planning across goals, methods, materials and assessments
- Considering UDL as applied to instruction, career assessment and transition

The UDL Guidelines

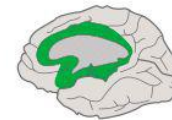
Universal Design for Learning Guidelines

I. Provide Multiple Means of Representation	II. Provide Multiple Means of Action and Expression	III. Provide Multiple Means of Engagement
1: Provide options for perception 1.1 Offer ways of customizing the display of information 1.2 Offer alternatives for auditory information 1.3 Offer alternatives for visual information	4: Provide options for physical action 4.1 Vary the methods for response and navigation 4.2 Optimize access to tools and assistive technologies	7: Provide options for recruiting interest 7.1 Optimize individual choice and autonomy 7.2 Optimize relevance, value, and authenticity 7.3 Minimize threats and distractions
2: Provide options for language, mathematical expressions, and symbols 2.1 Clarify vocabulary and symbols 2.2 Clarify syntax and structure 2.3 Support decoding of text, mathematical notation, and symbols 2.4 Promote understanding across languages 2.5 Illustrate through multiple media	5: Provide options for expression and communication 5.1 Use multiple media for communication 5.2 Use multiple tools for construction and composition 5.3 Build fluencies with graduated levels of support for practice and performance	8: Provide options for sustaining effort and persistence 8.1 Heighten salience of goals and objectives 8.2 Vary demands and resources to optimize challenge 8.3 Foster collaboration and community 8.4 Increase mastery-oriented feedback
3: Provide options for comprehension 3.1 Activate or supply background knowledge 3.2 Highlight patterns, critical features, big ideas, and relationships 3.3 Guide information processing, visualization, and manipulation 3.4 Maximize transfer and generalization	6: Provide options for executive functions 6.1 Guide appropriate goal-setting 6.2 Support planning and strategy development 6.3 Facilitate managing information and resources 6.4 Enhance capacity for monitoring progress	9: Provide options for self-regulation 9.1 Promote expectations and beliefs that optimize motivation 9.2 Facilitate personal coping skills and strategies 9.3 Develop self-assessment and reflection
Resourceful, knowledgeable learners	Strategic, goal-directed learners	Purposeful, motivated learners



© 2011 by CAST. All rights reserved. www.cast.org, www.udlcenter.org
 APA Citation: CAST (2011). Universal design for learning guidelines version 2.0. Wakefield, MA: Author.

Universal Design for Learning Guidelines



Provide Multiple Means of Engagement
Purposeful, motivated learners

Provide options for self-regulation
 + Promote expectations and beliefs that optimize motivation
 + Facilitate personal coping skills and strategies
 + Develop self-assessment and reflection

Provide options for sustaining effort and persistence
 + Heighten salience of goals and objectives
 + Vary demands and resources to optimize challenge
 + Foster collaboration and community
 + Increase mastery-oriented feedback

Provide options for recruiting interest
 + Optimize individual choice and autonomy
 + Optimize relevance, value, and authenticity
 + Minimize threats and distractions



Provide Multiple Means of Representation
Resourceful, knowledgeable learners

Provide options for comprehension
 + Activate or supply background knowledge
 + Highlight patterns, critical features, big ideas, and relationships
 + Guide information processing, visualization, and manipulation
 + Maximize transfer and generalization

Provide options for language, mathematical expressions, and symbols
 + Clarify vocabulary and symbols
 + Clarify syntax and structure
 + Support decoding of text, mathematical notation, and symbols
 + Promote understanding across languages
 + Illustrate through multiple media

Provide options for perception
 + Offer ways of customizing the display of information
 + Offer alternatives for auditory information
 + Offer alternatives for visual information



Provide Multiple Means of Action & Expression
Strategic, goal-directed learners

Provide options for executive functions
 + Guide appropriate goal-setting
 + Support planning and strategy development
 + Enhance capacity for monitoring progress

Provide options for expression and communication
 + Use multiple media for communication
 + Use multiple tools for construction and composition
 + Build fluencies with graduated levels of support for practice and performance

Provide options for physical action
 + Vary the methods for response and navigation
 + Optimize access to tools and assistive technologies



udlguidelines.cast.org | © CAST, Inc. 2018 | Suggested Citation: CAST (2018). Universal design for learning guidelines version 2.2 [graphic organizer]. Wakefield, MA: Author.

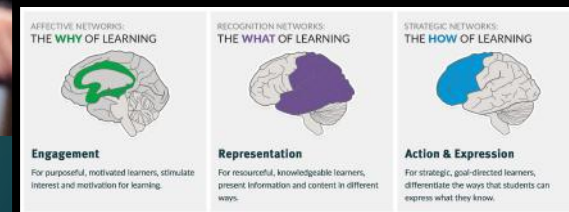
The UDL Guidelines 2018

<https://udlguidelines.cast.org/>

Ongoing advancements in the field...

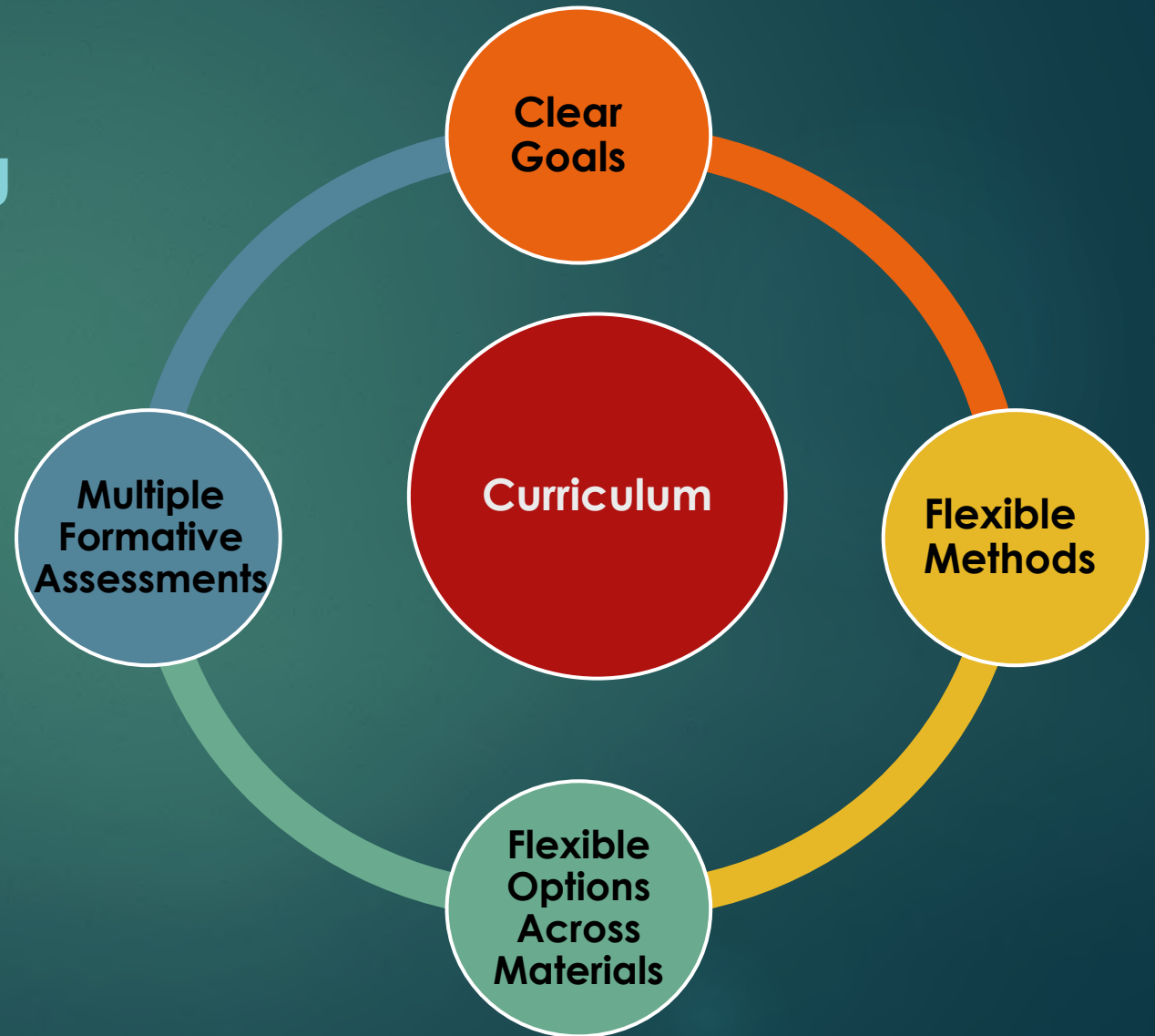
- Variability in learners is the norm.
- Variability is predictable and contextual.
- Learners vary across their background experiences and preferences.

https://youtu.be/O_MCvjkd8Jc



UNIVERSAL DESIGN FOR LEARNING (UDL)

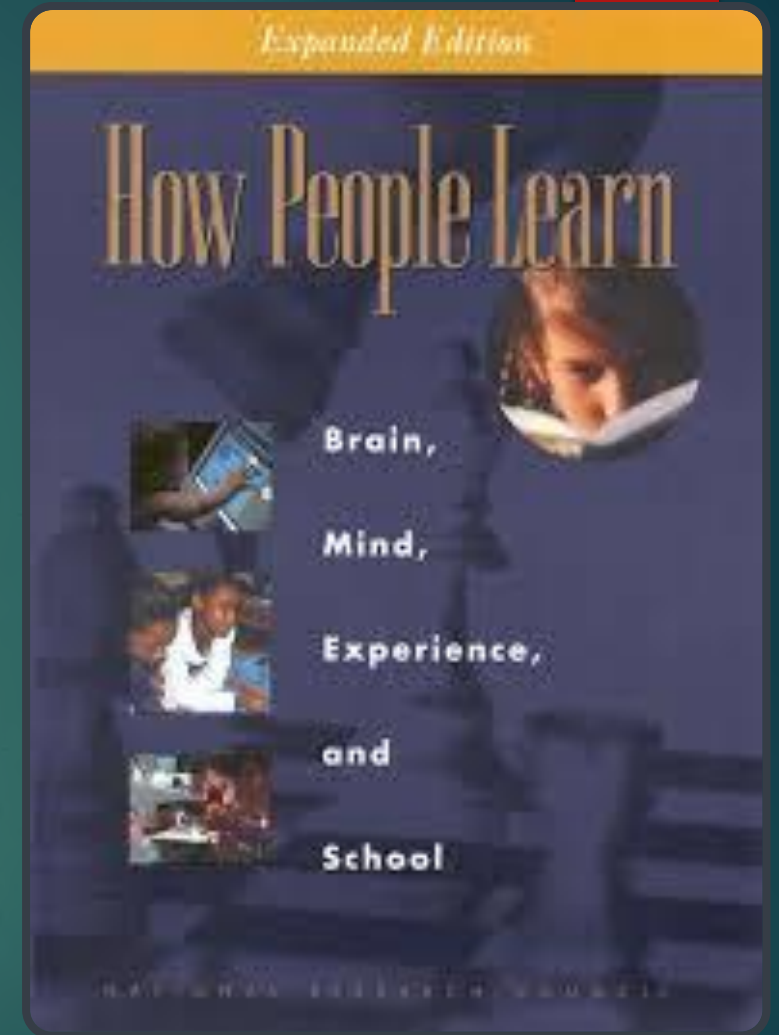
Universal Design for Learning



Novice vs Expert Learners

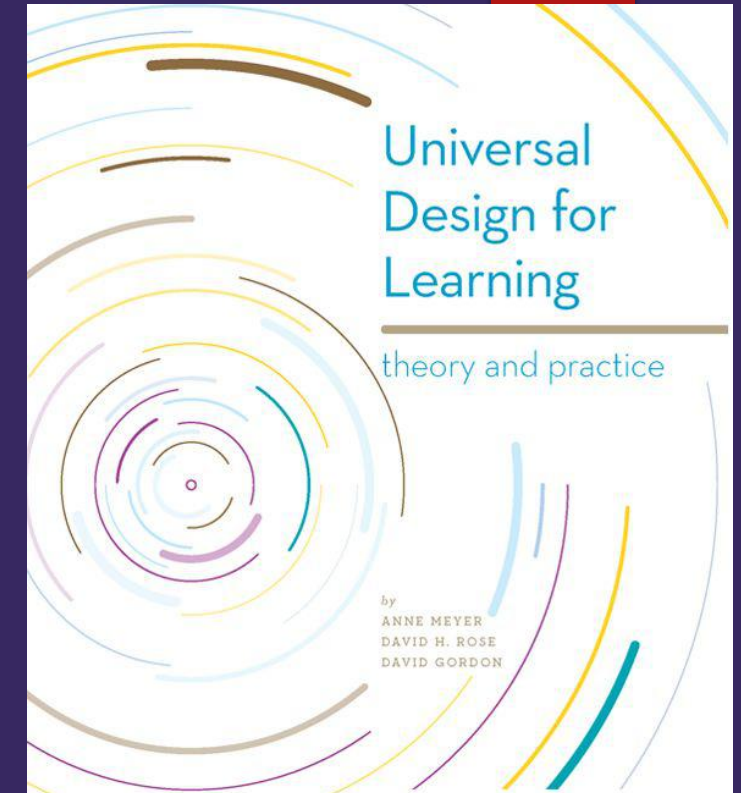
"Research shows that is is not simply general abilities such as memory or intelligence, nor the use of general strategies that differentiate experts from novices. Instead, experts have acquired extensive knowledge that affects what they notice and how they organize, represent, and interpret information in their environment. This, in turn, affects their abilities to remember, reason, and solve problems"

(National Research Council (2000). *How people learn: Brain, mind, experience, and school, Expanded edition*, Washington, DC: National Academy Press, P. 31)



“Teachers (educators) need to be expert learners themselves, continuously growing and changing. They need to be able to model and mentor the process of learning, with all its hills and valleys, exposing their own learning and making it explicit both in action and in personal reflection.”

**Meyer, Rose, & Gordon (2014).
*Universal Design for Learning: Theory & Practice***



<http://udltheorypractice.cast.org/login>

Becoming Expert Learners

- How do you define expert learning?
- How do you know it when you see it?
- How is your instruction designed to support all learners to be expert learners?

The Goal of UDL: Becoming Expert Learners		
Engagement Purposeful & Motivated Learners...	Representation Resourceful & Knowledgeable Learners...	Action and Expression Strategic & Goal-Directed Learners...
<ul style="list-style-type: none">• Are eager for new learning and are motivated by the mastery of learning itself• Are goal directed in their learning• Know how to set challenging learning goals for themselves• Know how to sustain the effort and resilience that reaching those goals will require• Monitor and regulate emotional reactions that would be impediments or distractions to successful learning	<ul style="list-style-type: none">• Consider prior knowledge when learning (Make connections to prior learning experiences)• Activate that prior knowledge to identify, organize, prioritize and assimilate new information• Recognize the tools and resources that would help find structure and remember new information• Know how to transform new information into meaningful and usable knowledge	<ul style="list-style-type: none">• Formulate plans for learning• Devise effective strategies and tactics to optimize learning• Organize resources and tools to facilitate learning• Monitor their progress• Recognize their strengths and weaknesses as learners• Abandon plans and strategies that are ineffective

CAST, Inc (2019). Symposium facilitator's informational meeting, *Webinar slides*.



The Syllabus and Course Elements



Early Adopter - Online Learning

- ▶ GW University –
 - ▶ 1997, Technology & Disabilities (fully online)
 - ▶ 2003-2013, Universal design for learning (hybrid-model)
 - ▶ 2013-present Universal design for learning (completely online)

George Washington University
School of Education and Human Development
Educational Technology Leadership Program

Course Title: Technology and Disabilities

Instructors:
Fran G. Smith, Ed.S., CVE, Vocational Technology Specialist
Mary L. Wilds, M.A. Ed., Assistive Technology Specialist

Course Title: Technology and Disabilities


Course Concept: Educators and other public service providers generally know very little about the tools and legal mandates for accommodating individuals with special needs. This is especially poignant for those who concern themselves professionally with educational and information technology; for they are likely to be called upon to recommend technological solutions. The problem is not simply a technical one; it involves negotiating the accommodation with a range of people variously concerned about the well-being of the disabled individual and the resources it will require to accommodate them. This course surveys the field of assistive technology as it impacts the lives of people with disabilities, including the performance of tasks related to employment, education and activities of daily living.


Who Should Participate: This course is intended for teachers in K-12 and post-secondary educators, administrators, rehabilitation service providers, vocational practitioners, and others concerned with an effective and affordable match between special needs and accommodating technologies.

Prerequisites: This course requires students to have access to electronic mail and the World Wide Web. Requisite skills should be acquired to operate these technologies without additional instruction. In addition, students will be required to submit all assignments in a wordprocessed document as an attached file to instructors.

Course Objectives:
Upon completion of this course, each student will be able to:

- Define and understand the benefits of assistive technology
- Identify the costs of adaptation and possible funding sources
- Understand the federal laws related to disability accommodation
- Identify resources to access assistive technology services, devices and personnel
- Identify the functional issues for individuals with disabilities
- Identify various types of adapted computer hardware and software components that may be used by individuals with disabilities at home, school or in the workplace
- Recognize the basic principles, techniques and strategies for conducting effective home, school or workplace evaluations in making appropriate accommodations
- Identify alternative strategies using assistive technology
- Delineate between the types of low and high assistive technologies




 THE GEORGE WASHINGTON UNIVERSITY WASHINGTON, DC

SPED 6210
Universal Design for Learning

Course Contact Information:
Spring 2019, 15 weeks (Online) – January 14 – May 8, 2019 (Each week will begin on Mondays)
Instructor: Frances G. Smith, Ed.D., CVE
E-Mail: fgsmith@gwu.edu
Phone: C-804-357-7009
Office/Office Hours: Email, text, chat, videoconference (e.g., Blackboard Collaborate, Skype, Zoom) or phone (by appointment only)

Guiding Lens: Learner Variability is the Norm

Research from the learning sciences has continued to confirm that students come to the classroom with varied backgrounds, interests, approaches and ways that they learn. Student's prior learning experiences are important to understand, the context in which learning occurs and, their unique approaches (Meyer, Rose, & Gordon, 2014¹; Rose & Meyer, 2002²). Understanding that our brains are very complex organs and are shaped by experiences offers a beginning platform to grasp, make meaning of, and cultivate into our own instructional practice. As we forge forward, it is our job to use this new knowledge to design instructional settings, be those in educational settings, transition programs, or the workplace, and in ways that can leverage this individual learner variability as a strength. This course is designed to provide you with a broad introduction to the growing field of universal design for learning (UDL). First you'll explore the history, policy, foundational concepts, and definitions of what we call the framework of UDL. Second, you'll gain an in-depth understanding of how UDL relates to the learning brain and the core networks that address the what, how, and why of learning. Finally, you'll learn how to apply this UDL knowledge in ways that impact the goals, methods, materials, and assessments that are core to any instructional lesson, plan, or training situation.



¹ Meyer, A., Rose, D. H., & Gordon, D. (2014). *Universal design for learning: Theory and practice*. Wakefield, MA: CAST Professional Publishing.
² Rose, D. H. & Meyer, A. (2002). *Teaching every student in the digital age: Universal design for learning*. Alexandria, VA: Association for Supervision & Curriculum Development.

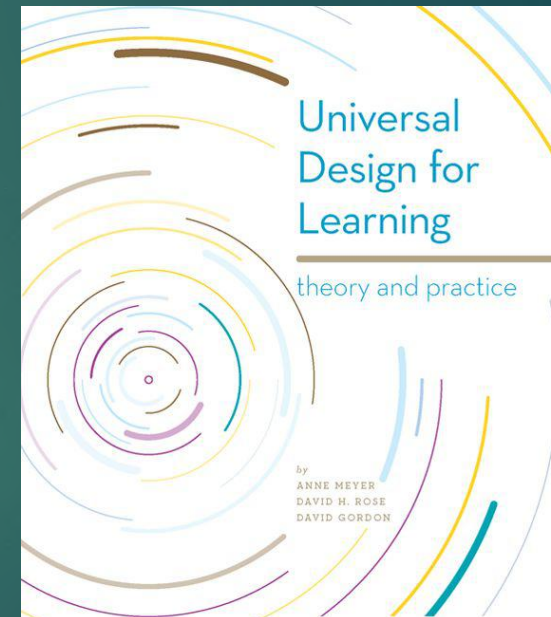
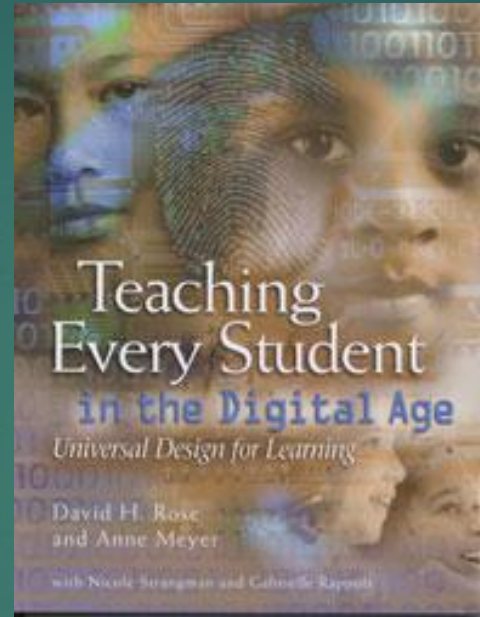
Universal Design for Learning: A Rubric for Evaluating Your Course Syllabus

A well-designed syllabus offers more than the instructor's contact information and a course outline. It also provides information about course goals and objectives, grading procedures, support services, and course policies regarding class participation, missed examinations, late assignments, and academic integrity. ~Howard University

Elements	Traditional Syllabus	Enhanced Syllabus	Exemplary Syllabus	Tips/Tools
Instructor Information	Syllabus provides a single way to way to contact instructor for student questions or concerns.	Syllabus offers varied ways to contact instructor for student questions or concerns.	Syllabus offers varied ways to contact instructor for student questions or concerns and provides brief overview of instructor.	
Textbooks	Syllabus lists required and recommended textbooks.	Syllabus lists required and recommended textbooks with information about where they can be purchased. Short statement provided as to why the textbook was selected.	Syllabus lists required and recommended textbooks with information about where they can be purchased. Electronic equivalent provided or texts ordered early to ensure timely conversion in an alternative format. Short statement provided as to why the textbook was selected.	
Course Assignments (<i>explanation</i>)	Syllabus identifies all learning objectives, course requirements/ assignments, and appropriate due dates.	Syllabus identifies and explains all learning objectives, course requirements/ assignments, and appropriate due dates.	Syllabus clearly explains and links all learning objectives, course requirements/assignments, and appropriate due dates.	
Course Assignments (<i>examples</i>)	Syllabus provides information on how to complete major course projects, activities or papers.	Syllabus provides detailed guidance on how to complete major course projects, activities or papers.	Syllabus provides detailed guidance on how to complete major course projects, activities or papers and offers links to examples and illustrations as appropriate.	
Course Assignments (<i>submission</i>)	Syllabus requires students to submit course assignments in a single or specific way.	Syllabus allows for specific students to submit course assignments in alternative formats with prior instructor approval.	Syllabus provides multiple ways for all students to submit course assignments.	
Course Assignments (<i>grading</i>)	Syllabus stipulates grading criteria for all course requirements.	Syllabus stipulates grading criteria for all course requirements and offers detail on items requiring further clarification.	Syllabus stipulates grading criteria for all course requirements and offers detail on items requiring further clarification and links to instructor grading rubrics.	
Course Calendar	Syllabus has no or minimal information in calendar form.	Syllabus utilizes a course calendar to specify due dates for course activities.	Syllabus and Learning Management System (LMS) utilize a course calendar to specify and periodically reinforce due dates, highlighting key course events and activities.	
Student Resources	Syllabus contains no information about student-oriented campus resources.	Syllabus contains general information about student-oriented campus resources.	Syllabus contains general information about student-oriented campus resources and highlights specific additional resources that may be unique to this course.	
Format (<i>length</i>)	Syllabus provides basic information in a few pages.	Syllabus contains all course information, guidance, and examples, but may be cumbersome for some to navigate.	Syllabus is carefully crafted to provide sufficient information and guidance yet clearly links to additional resources and examples avoiding a text heavy document.	
Format (<i>accessible</i>)	Syllabus is offered in hardcopy form on the first day of class.	Syllabus is made available in hardcopy and electronically upon student request.	Syllabus is made available to students as an accessible electronic document and hardcopy form.	
Format (<i>visible</i>)	Syllabus is offered in hardcopy form on the first day of class.	Syllabus is offered in multiple ways so students can access information as needed throughout the course.	Syllabus is offered and posted in multiple ways so students can access information easily and repeatedly. Key items are periodically reviewed.	

Syllabus Evaluation

Core Course Texts



Teaching Every Student in the Digital Age: Universal Design for Learning (2002)

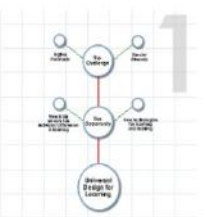
One book: Many options

- Open digital access, print copy
- Sectioned chapters
- Embedded structural supports
- Links to support background knowledge
- Links to media, web to activate interests

Chapter 1: Education in the Digital Age

This chapter introduces the concept of Universal Design for Learning, a framework that can help you turn the challenges posed by high standards and increasing learner diversity into opportunities to maximize learning for every student.

Concept Map:



Click image to enlarge

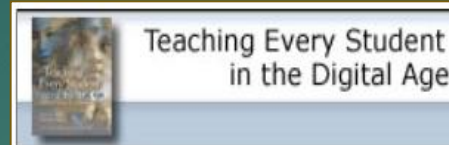
Chapter 1 Links:

Example: A school leader describes the importance of digitized curriculum materials.

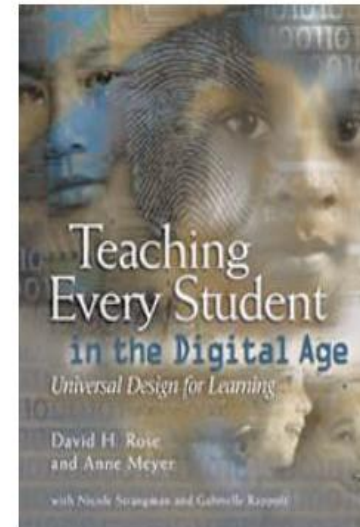
Resource: Most state and national standards are available online; here is a resource with convenient links.

Chapter 1 Sections:

- A School District in Transition
- The Challenge: Learner Diversity and High Standards
- The Opportunity: New Brain Research and New Technologies
- UDL: The "Intersection of Initiatives"



Teaching Every Student in the Digital Age: Universal Design for Learning
David H. Rose & Anne Meyer
ASCD, 2002



[Purchase this book](#)

[Acknowledgments](#)

[Preface](#)

[Chapter 1: Education in the Digital Age](#)

[Chapter 2: What Brain Research Tells Us About Learner Differences](#)

[Chapter 3: Why We Need Flexible Instructional Media](#)

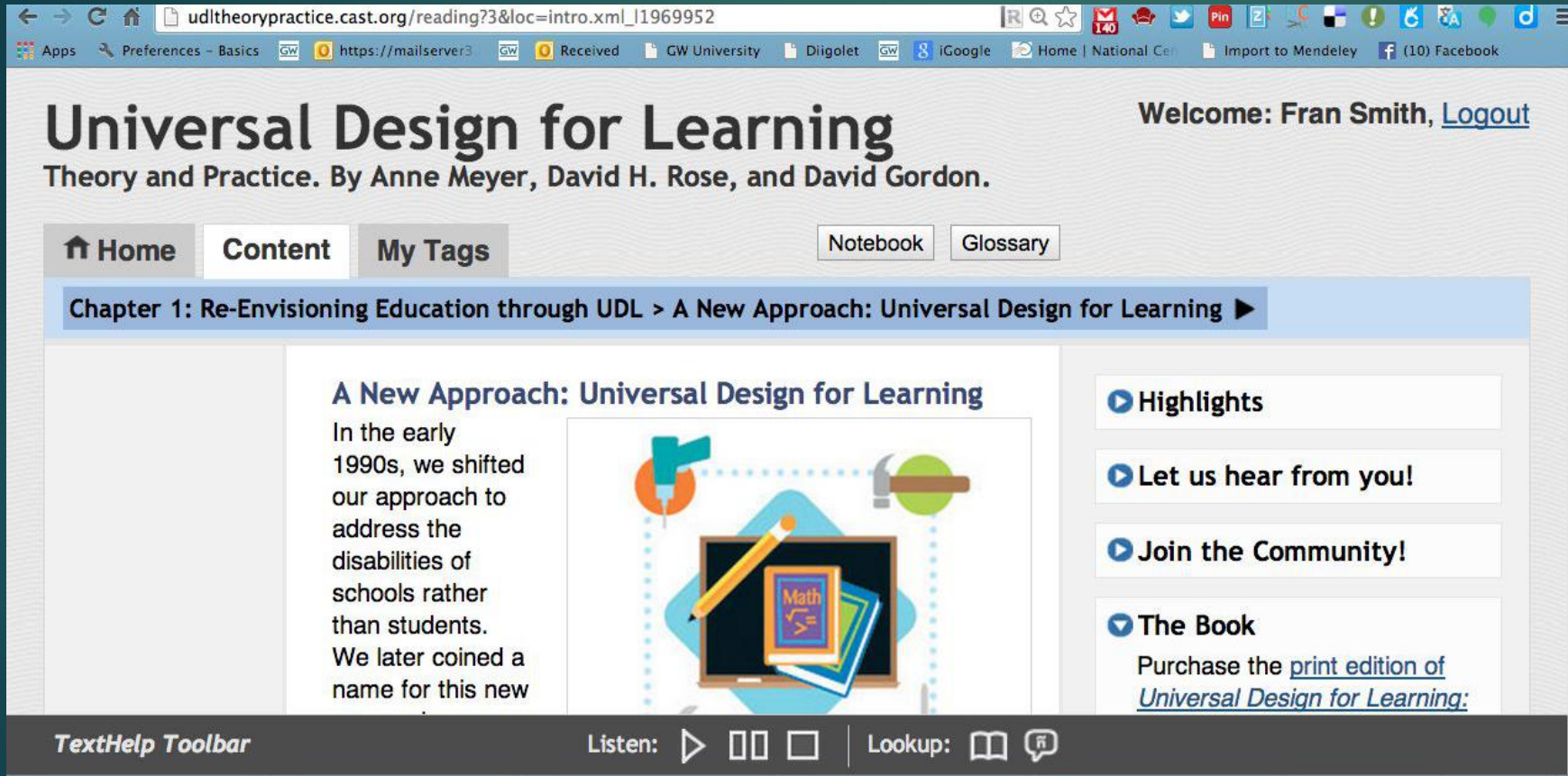
[Chapter 4: What Is Universal Design for Learning?](#)

[Chapter 5: Using UDL to Set Clear Goals](#)

[Chapter 6: Using UDL to Support Every Student's Learning](#)

[Chapter 7: Using UDL to Accurately Assess Student Progress](#)

UDL Theory and Practice (2014)



The screenshot shows a web browser window displaying the 'Universal Design for Learning' website. The URL bar shows 'udltheorypractice.cast.org/reading?3&loc=intro.xml_11969952'. The page header includes a navigation menu with 'Home', 'Content', and 'My Tags' tabs, and a 'Welcome: Fran Smith, Logout' message. The main content area is titled 'Chapter 1: Re-Envisioning Education through UDL > A New Approach: Universal Design for Learning'. Below this, there is a section titled 'A New Approach: Universal Design for Learning' with a text block and an illustration of a person using a pencil and a book. To the right, there are links for 'Highlights', 'Let us hear from you!', 'Join the Community!', and 'The Book'. The footer includes a 'TextHelp Toolbar' with 'Listen' and 'Lookup' buttons.

Universal Design for Learning
Theory and Practice. By Anne Meyer, David H. Rose, and David Gordon.

Welcome: Fran Smith, [Logout](#)

Home Content My Tags Notebook Glossary

Chapter 1: Re-Envisioning Education through UDL > A New Approach: Universal Design for Learning ▶

A New Approach: Universal Design for Learning

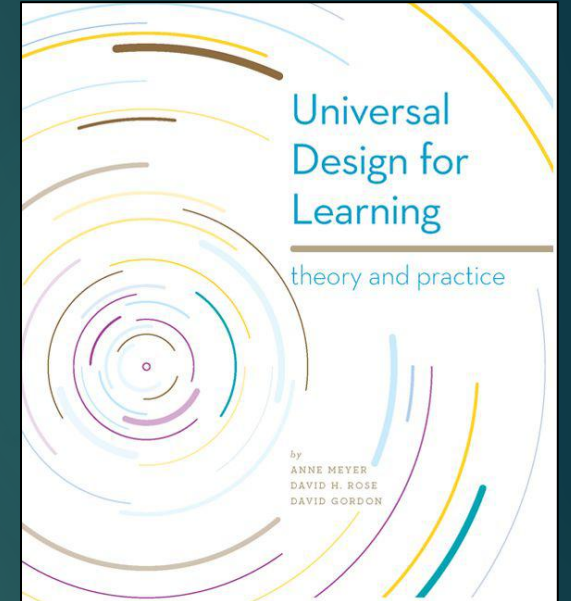
In the early 1990s, we shifted our approach to address the disabilities of schools rather than students. We later coined a name for this new

Highlights

- ▶ Let us hear from you!
- ▶ Join the Community!
- ▼ The Book

Purchase the [print edition of Universal Design for Learning:](#)

TextHelp Toolbar Listen: [play] [stop] [mute] Lookup: [book] [chat]



Print Copy

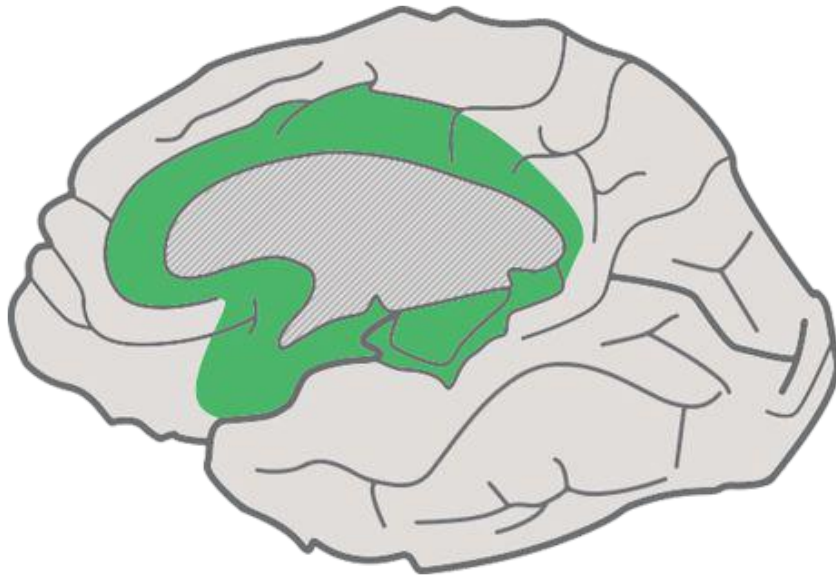
Open Access – Digital Copy

(<http://udltheorypractice.cast.org/login>)



Course Design

AFFECTIVE NETWORKS:
THE **WHY** OF LEARNING



Multiple
Options for
Engagement

Engagement



PRE-SURVEY OF
EXPERIENCES,
INTERESTS, AND GOALS



SYNCHRONOUS
MEETING TO
MEET-GREET



HIGHLIGHTING
OPTIONAL MEANS FOR
ASSIGNMENTS IN
SYLLABUS



INVITING UDL GUEST
EXPERTS



OFFERING CHOICES OF
HOW STUDENTS
DEMONSTRATE THEIR
UNDERSTANDINGS



PERSONALIZING
LEARNING

Provide multiple means of Engagement



Affective Networks
The "WHY" of Learning

Provide options for **Recruiting Interest**

- Optimize individual choice and autonomy
- Optimize relevance, value, and authenticity
- Minimize threats and distractions

Provide options for **Sustaining Effort & Persistence**

- Heighten salience of goals and objectives
- Vary demands and resources to optimize challenge
- Foster collaboration and community
- Increase mastery-oriented feedback

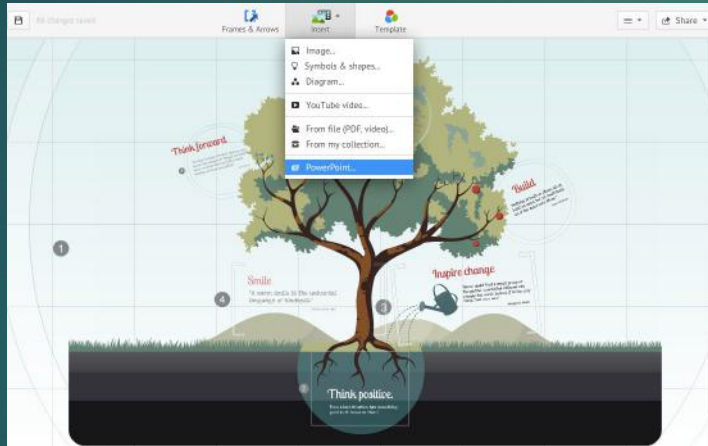
Provide options for **Self Regulation**

- Promote expectations and beliefs that optimize motivation
- Facilitate personal coping skills and strategies
- Develop self-assessment and reflection

Creative uses of space to engage learning –2011 class



Multiple Means for Engagement



Choice – Options – Relevance

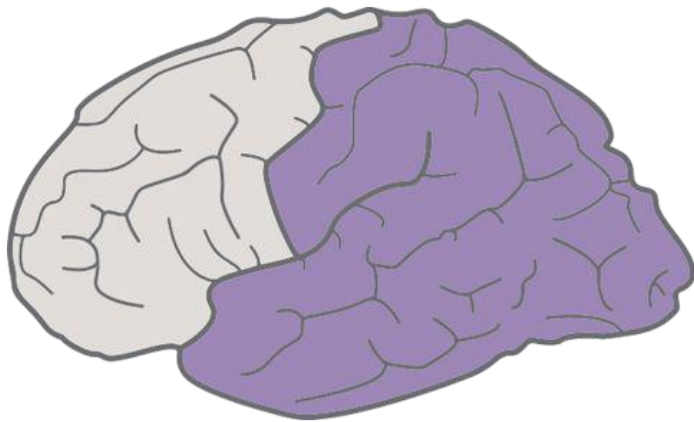
III. Provide Multiple Means of Engagement

Recruiting interest

Sustaining effort and persistence

Self-regulation

RECOGNITION NETWORKS:
THE **WHAT** OF LEARNING



**Multiple Options
for Representation**

Provide multiple means of **Representation**

Recognition Networks
The "WHAT" of Learning



Provide options for **Perception**

- Offer ways of customizing the display of information
- Offer alternatives for auditory information
- Offer alternatives for visual information

Provide options for **Language & Symbols**

- Clarify vocabulary and symbols
- Clarify syntax and structure
- Support decoding of text, mathematical notation, and symbols
- Promote understanding across languages
- Illustrate through multiple media

Provide options for **Comprehension**

- Activate or supply background knowledge
- Highlight patterns, critical features, big ideas, and relationships
- Guide information processing and visualization
- Maximize transfer and generalization

First Steps

- ▶ **Building an Accessible Foundation**
 - ▶ **Digital materials (Options for physical action)**
 - ▶ **Captioned videos and transcripts (Options for perception)**
 - ▶ **Designs that facilitate comprehension**

THE GEORGE WASHINGTON UNIVERSITY
WASHINGTON, DC

My Blackboard Courses Blackboard Guides

START HERE

Build Content ▾ Assessments ▾ Tools ▾ Partner Content ▾

- Universal Design for Learning _Fall 2013 Online
- COURSE INFORMATION
 - Announcements
 - START HERE
 - Syllabus & Course Schedule
 - Weekly Sessions
 - Course Assignments
 - Course Texts
- COURSE RESOURCES
 - GW Library Resources - UDL
 - Library E-Reserves
 - Websites

Meet Dr. Smith and An Overview of the Course

Best Practices for Taking an Online Class

What is in the Menu to the Left?

Blackboard Resources and Tutorials

Layout

Consistent layout with folders containing files, guides, resources

Opening location with resources to support prior knowledge

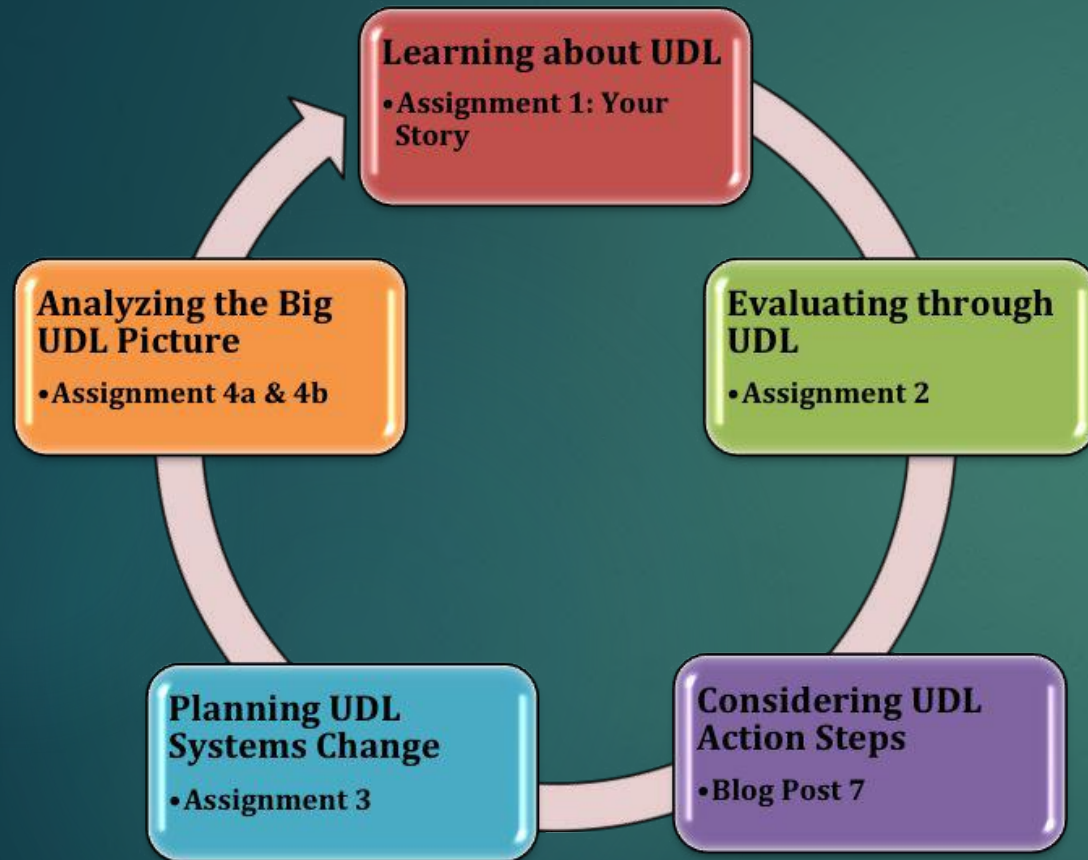
I. Provide Multiple Means of Representation

Perception

Language, expressions, and symbols

Comprehension

Multiple Means of Representation



Week 1: Getting Acquainted

Universal Design for Learning -
Graduate Course; Fall 2012 -
Online

Overview

This week provides an opportunity for you to get acquainted with the online course format, tools in the Blackboard space, setting up your online communication tools and learning more about each other.

What You Will Learn

At the end of this week, participants will have:

- Learned how to navigate and use tools in the Blackboard web space
- Become familiar with the syllabus, course schedule, course structure, and expectations
- Introduced themselves to other participants in this course
- Learned how to set up a personal blog and post your first reflection

Instructor Remarks/Perspectives



Welcome to *Universal Design for Learning - Fall 2012*. This course has been taught at GW University (GWU) for the past ten years, typically as a summer institute. This is our first completely online offering. You are a group of eleven individuals taking this course. Each week you'll have this "Print Me First" document to provide a review of the week's activities and expectations. Use this as your guide.

Design of the Course

This course was initially modeled after the first UDL Institute held at CAST in Wakefield, MA. The content in the field has however grown exponentially and crosses many settings where UDL can be considered as a framework. Within the course you will find a number of different components that cover these broader areas.

- The readings are offered as references and peer-reviewed articles that share the perspectives and research of many in the field of UDL.
- Assignments associated with the readings are designed to help you apply and integrate your understanding as we move through the content of UDL.
- The discussions are offered as opportunities for you to discuss the content with several UDL experts in the field and with your peers in this course.
- Reflective blog posts and periodic assessments are offered as a way for you to share and monitor your ongoing progress and UDL learning.

Course Structure and Components

The course is divided into fifteen weekly sessions. Each week covers a new topic associated with readings, assignments, discussions, or blog reflections. Details for these can be found in the Syllabus and Course Projects.

Comments, Questions or Concerns

I am always available by email, franith@gwu.edu, and will try to get a response back to you within 24 hours (typically less). I am also available by phone, chat or video conference by appointment.

Overview of Activities

1. Announcements Make it a habit to monitor this section of Blackboard as I will post here regularly! Take this week to explore all of the sections that are open within Blackboard.

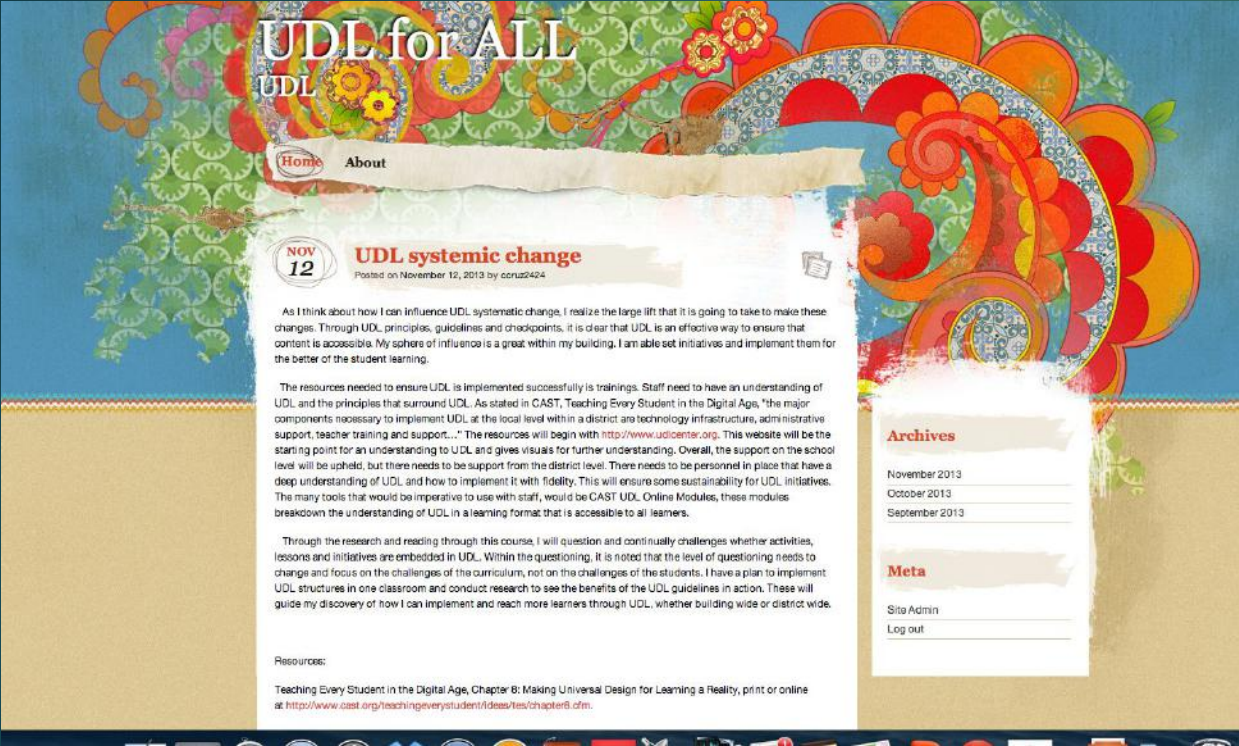
I. Provide Multiple Means of Representation

Perception

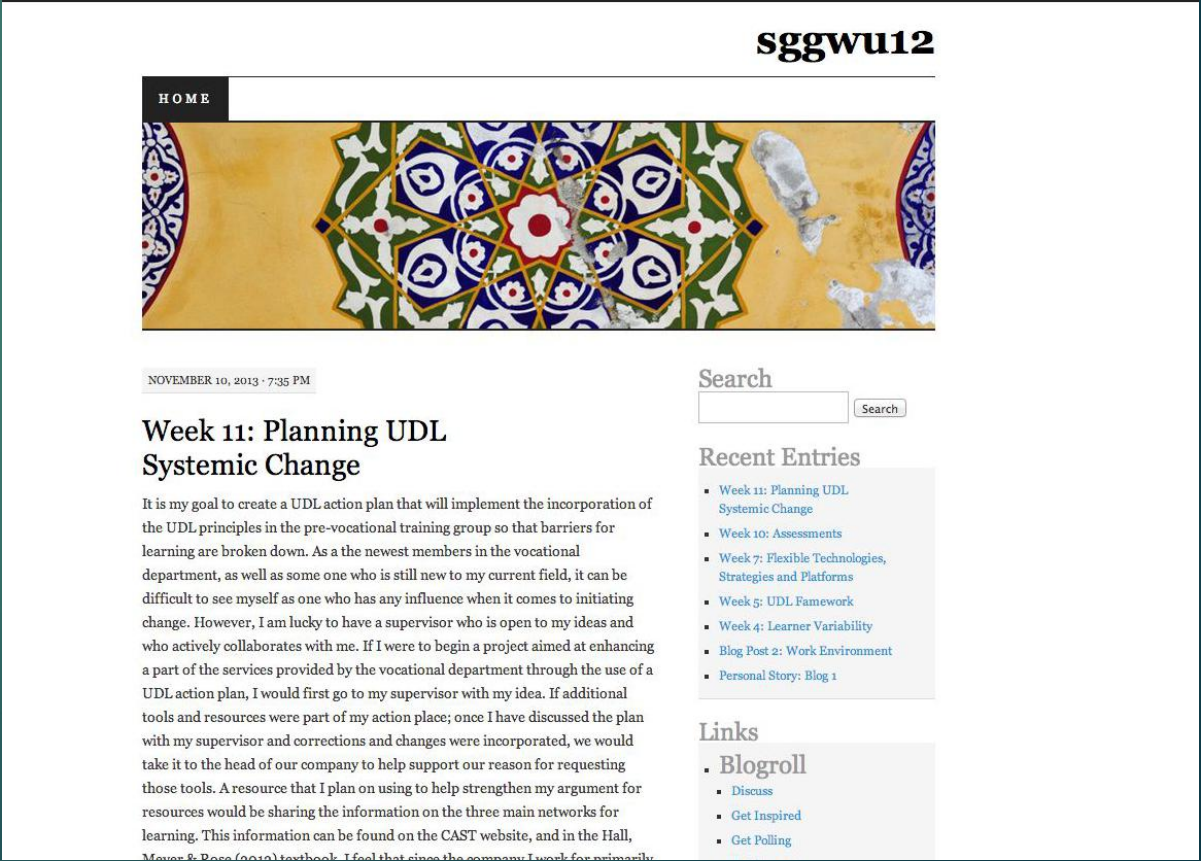
Language, expressions, and symbols

Comprehension

Graduate Student Reflective Blogs

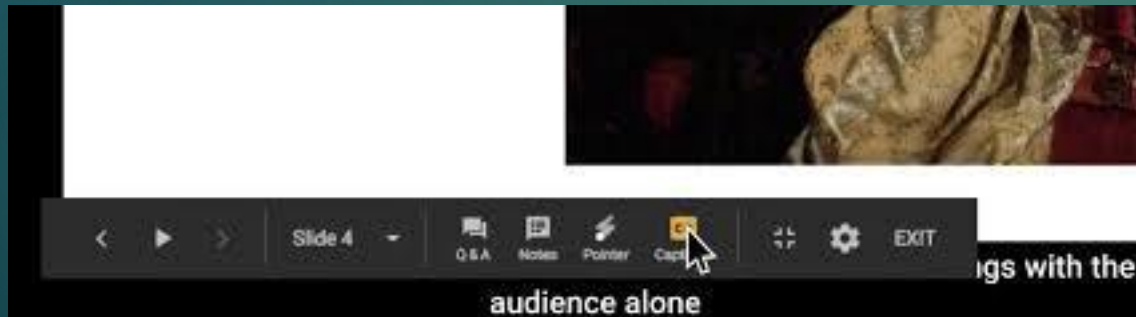


Reflective Blogs

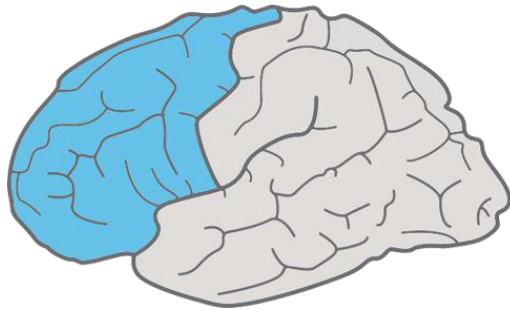


Live Captioned Video: Example

- ▶ Google Accessibility - <https://support.google.com/a/answer/1631886?hl=en>
- ▶ Google Slides and live captioning: <https://support.google.com/docs/a/answer/9109474>



STRATEGIC NETWORKS:
THE **HOW** OF LEARNING



Multiple Options for Action/ Expression

Action and Expression



Emphasis on multiple options for action/expression



Ongoing formative checkpoints to clarify understanding



Offering Models of what projects might look like



Rubrics for assignments



Modeling/ promoting assistive technologies

Provide multiple means of **Action & Expression**



Strategic Networks
The "HOW" of Learning

Provide options for **Physical Action**

- Vary the methods for response and navigation
- Optimize access to tools and assistive technologies

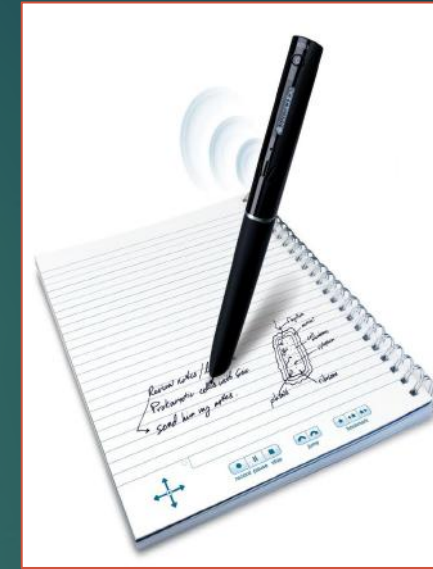
Provide options for **Expression & Communication**

- Use multiple media for communication
- Use multiple tools for construction and composition
- Build fluencies with graduated levels of support for practice and performance

Provide options for **Executive Functions**

- Guide appropriate goal-setting
- Support planning and strategy development
- Facilitate managing information and resources
- Enhance capacity for monitoring progress

A “Note” about Notetaking



<http://www.livescribe.com>

- Volunteers to capture notes
- Student variability across note taking
- Digital means for capturing notes

Rose, D. H., Harbour, W. S., Johnston, C. S., Daley, S. G. & Abarbanell, L (2006). Universal design for learning in postsecondary education. Retrieved from <http://www.udlcenter.org/sites/udlcenter.org/files/UDLinPostsecondary.pdf>

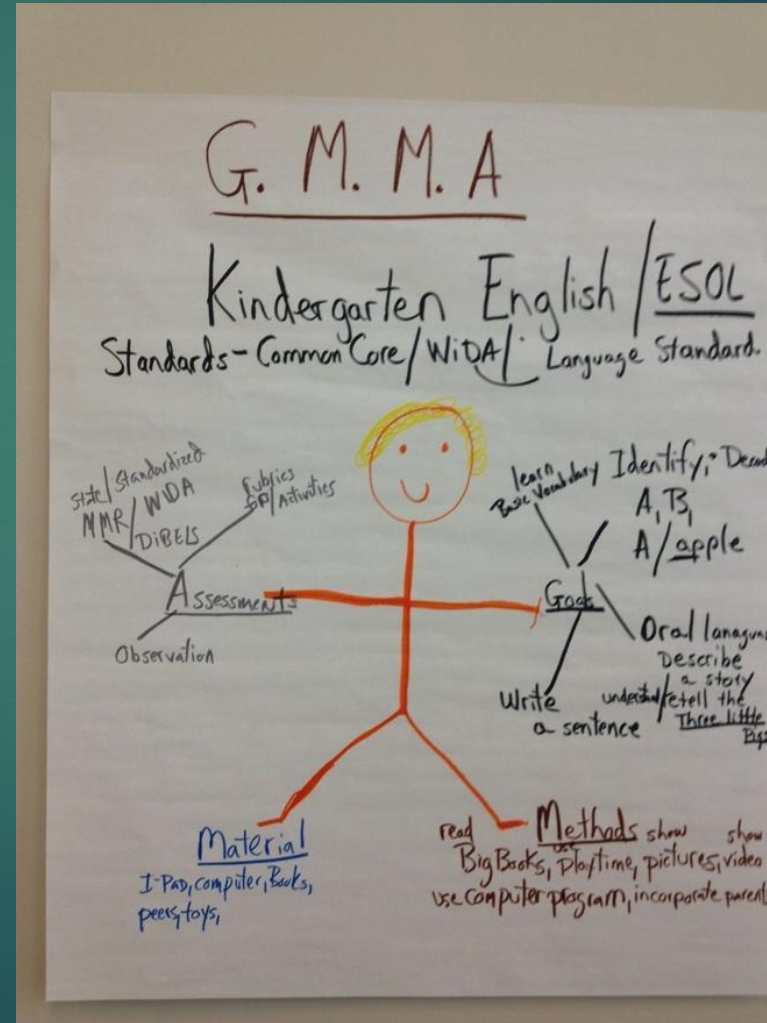
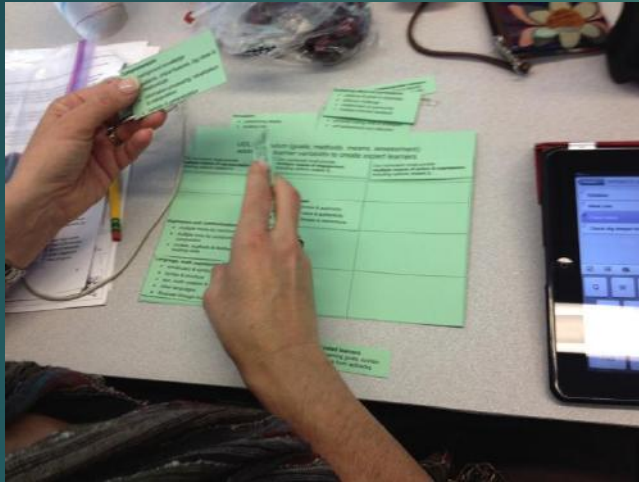
II. Provide Multiple Means of Action and Expression

Physical action

Expression and communication

Executive function

Multiple ways to monitor progress and understanding



Graduate Student's Final Presentation Using PB Wiki – UDL Summer Class 2009

refriedbeans.pbworks.com/w/page/11352667/FrontPage?email=fgsmith%40vcu.edu

My PBworks Workspaces refriedbeans

Wiki Pages & Files



VIEW EDIT

FrontPage

last edited by Jennifer Fox-Thomas 5 years, 10 months ago

Welcome to The Refriedbeans Wiki!

It is the purpose of this wiki to reify our beans (brains) as we compare and contrast **Assistive Technology (AT)** and **Universal Design for Learning (UDL)**.



Overview:

- We gather our background knowledge in a brief historical look at AT and UDL.
- We compare some of the basic aspects of Assistive Technology and Universal Design for Learning from the perspective of the classroom teacher for students with learning issues.
- We open a discussion on the three UDL principles of:
 - Providing Multiple Means of Representation
 - Providing Multiple Means of Expression, and
 - Providing Multiple Means of Engagement in the context of a UDL and AT comparison.
- We present our references and look at some hyperlinks to additional resources for our exploration of AT and UDL.
- All documents related to topics above are listed in the folders to the right.** Click on a document to open it -- provide feedback to documents in the folders. All feedback is approved before it is published. Please provide all appropriate references in APA form for any information you add on our References and Resources document.

Helpful Hyperlink Resources that help with the message of this WIKI:

<http://www.design.ncsu.edu/cud/>
The Center for Universal Design (CUD) is a national information, technical assistance, and research center that evaluates, develops, and promotes accessible and universal design in housing, commercial and public facilities, outdoor environments, and products. Our mission is to improve environments and products through design innovation, research, education and design assistance.

<http://www.cast.org/about/index.html> Founded in 1984 as the Center for Applied Special Technology, CAST has earned international recognition for its development of innovative, technology-based educational resources and strategies based on the principles of Universal Design for Learning (UDL).

To edit this page, [request access](#) to the workspace.

Navigator

- ★ Starred Pages and Files
- Brief History of UDL and AT
- Comparison of UDL and AT
- Discussion of Multiple Means of Enga...
- Discussion of Multiple Means of Expre...
- Discussion of Multiple Means of Repr...

Pages Files options

SideBar

Wiki-Wiki-Savvy or "How do I work a wiki?"
Map of this Refriedbeans Wiki
Return to Front Page
UDL VIDEO (low res) [Ms Fox UDL Project](#)
[WMV.WMV](#)
UDL Testimonial (To Be Included at a Later Date)

Recent Activity

- Discussion of Multiple Means of Expression commented on by Jennifer Fox-Thomas
- Discussion of Multiple Means of Expression commented on by Jennifer Fox-Thomas
- FrontPage edited by Jennifer Fox-Thomas
- FrontPage edited by Jennifer Fox-Thomas

Inclusive and universal designs spur innovative thinking!

My final plan is attached. Thank you for this assignment and this class.Unrelated to this project but related to UDL...a friend of my husband's plans to run for mayor of our city. I had a great discussion with him about using the UDL framework to reach, be accessible to, and listen to voters. UDL is applicable anywhere!

---Graduate Student, Spring, 2018

“First of all, I thank you whole-heartedly for the capacity building you developed in us! Everything my director has brought up, I feel as though I could dance toe-to-toe with her.

The fact that I was familiar with the work of Ralabate, Posey, Novak and Loui Lord Nelson and could converse with Amy, *was the most fantastic feeling!* Once we found our commonalities, we branched off and talked about her UDL work in our state. She invited me to 2 UDL trainings in January”

--Graduate Student, Fall, 2020

Building Expert Learners in UDL

“Thanks for a wonderful semester. I was skeptical of taking an online course back when I emailed you over the summer but am definitely a convert! As a general education teacher, I am really glad to have the foundation I now have in UDL -- and will definitely recommend to my advisor that other Curriculum and Instruction students look into this course.”

---*Graduate student, Spring 2020*

The Goal of UDL: Becoming Expert Learners		
Engagement Purposeful & Motivated Learners...	Representation Resourceful & Knowledgeable Learners...	Action and Expression Strategic & Goal-Directed Learners...
<ul style="list-style-type: none">• Are eager for new learning and are motivated by the mastery of learning itself• Are goal directed in their learning• Know how to set challenging learning goals for themselves• Know how to sustain the effort and resilience that reaching those goals will require• Monitor and regulate emotional reactions that would be impediments or distractions to successful learning	<ul style="list-style-type: none">• Consider prior knowledge when learning (make connections to prior learning experiences)• Activate that prior knowledge to identify, organize, prioritize and assimilate new information• Recognize the tools and resources that would help find structure and remember new information• Know how to transform new information into meaningful and usable knowledge	<ul style="list-style-type: none">• Formulate plans for learning• Devise effective strategies and tactics to optimize learning• Organize resources and tools to facilitate learning• Monitor their progress• Recognize their strengths and weaknesses as learners• Abandon plans and strategies that are ineffective

The Goal of UDL: Becoming Expert Learners		
Engagement Purposful & Motivated Learners...	Representation Resourceful & Knowledgeable Learners...	Action and Expression Strategic & Goal-Directed Learners...
<ul style="list-style-type: none"> Are eager for new learning and are motivated by the mastery of learning itself Are goal directed in their learning Know how to set challenging learning goals for themselves Know how to sustain the effort and resilience that reaching those goals will require Monitor and regulate emotional reactions that would be impediments or distractions to successful learning 	<ul style="list-style-type: none"> Consider prior knowledge when learning (Make connections to prior learning experiences) Activate that prior knowledge to identify, organize, prioritize and assimilate new information Recognize the tools and resources that would help find structure and remember new information Know how to transform new information into meaningful and usable knowledge 	<ul style="list-style-type: none"> Formulate plans for learning Devise effective strategies and tactics to optimize learning Organize resources and tools to facilitate learning Monitor their progress Recognize their strengths and weaknesses as learners Abandon plans and strategies that are ineffective

► “I have learned a lot in the course; not only about teaching all students but about my strengths and weaknesses.

I often thought back to the questions we answered at the beginning of the semester and realize how little I knew about myself when I answered it.

► I also wanted to mention how much I appreciate your comments on my writing. I was very impressed with your writing....so I take your comments very seriously.”

--*Graduate Student, Spring 2020*

“I loved this course. My professor incorporated the best practices being taught to us, so I saw it in action. Homework was just right and very focused so I could really think about the concepts deeply and think about ways to apply them in my practice.

--*Doctoral Student, Summer, 2020*

Where are They Now?

- ▶ National UDL leaders in the US and beyond.
- ▶ Change agents infusing UDL into local, regional, and state programs.
- ▶ New leaders expanding new models in museum education with a UDL lens.
- ▶ Educators enriching instructional programs with UDL components.
- ▶ Faculty teaching with UDL as best practice.
- ▶ Technology leaders infusing UDL into their protocols.
- ▶ Practitioners designing work-based learning approaches that include UDL.

Lessons Learned

- ▶ Early adopters can often face many barriers – limited research, less technology flexibility, more barriers.
- ▶ Exploring partnerships helps open opportunities for growth, campus expansion, and course enrichment.
- ▶ Using a UDL lens to guide best practices is important to spur and model best practice in instructional design!
- ▶ Following trends in technology, instruction, and learning keeps pace with innovation --- and student preferences.
- ▶ Emphasizing the important focus of UDL for building expert learners is invaluable for graduate students to learn.



LESSONS LEARNED

Resources

- ▶ CAST, <http://www.cast.org>
- ▶ National Center on Accessible Educational Materials (AEM), <https://aem.cast.org/>
- ▶ UDL on Campus, <http://udloncampus.cast.org/home>
- ▶ Educause Learning Initiative, <https://www.educause.edu/eli>
- ▶ The Horizon Report, <https://bit.ly/3Ejwmxg>

Question/
comments?